

REMARKS

Entry of the foregoing and reconsideration of the application identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.111 and in light of the remarks which follow, are respectfully requested.

By the above amendments, the abstract has been replaced in accordance with the Examiner's suggestion. Claim 1 has been amended for clarification purposes, and now recites the phrase "to obtain a reaction medium, wherein the reaction medium has a pH of less than 3". Support for such amendment can be found in the specification at least at page 4, lines 16-18. Claims 1 and 26 have been amended for readability purposes. Claim 11 has been amended by deleting the word "gentle". Claim 23 has been amended by replacing the word "few" with "6". Support for such amendment can be found in the specification at least at page 5, lines 9-12. Claims 16 and 27 have been amended for clarification purposes by deleting the phrase "organic coloring agents for cosmetic use". New claims 28 and 29 are directed to subject matter deleted from claims 16 and 27, respectively.

In the Official Action, claims 4, 11-13 and 17-27 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. This rejection is moot in light of the above amendments to claims 1, 11, 23 and 27. Accordingly, withdrawal of such rejection is respectfully requested.

Claims 1-27 stand rejected under 35 U.S.C. §112, first paragraph, for the reasons set forth at page 3 of the Official Action. Specifically, the Examiner has taken the position that the specification does not enable the use of inorganic matrices other than a silicon-based inorganic matrix, alleging that "there is totally [sic] devoid of guidance as to whether any non-silicon based inorganic matrix is suitable for the sol-gel process required in cross-linking of the inorganic matrix." Contrary to this assertion, however, Applicants' disclosure at page

3, lines 12-35, discusses the use of various inorganic compounds other than silicon-containing compounds, in the formation of the inorganic matrix:

The precursor of the inorganic matrix is an inorganic compound capable of crosslinking by a sol-gel process chosen from inorganic compounds which have hydroxyl groups bonded to a metal M when they are in solution. M can be Si, Al, Ti or Zr. Si and Al are particularly preferred. These compounds can be chosen from compounds capable of gelling according to the polymerization of molecular entities (PME) mechanism and from compounds capable of gelling according to the destabilization of colloidal solutions (DCS) mechanism. These mechanisms are described in particular by C.J. Brinker & G.W. Scherrer ["Sol-Gel Science, The Physics and Chemistry of Sol-Gel Processing", Eds, 1990, Academic Press Inc., Harcourt Brace Jovanovich Publishers, ISBN 0-12-134970-5], or by M. Henry, J.P. Jolivet & J. Livage ["De la solution a l'oxyde" [From the solution to the oxide], InterEditions/CNRS Editions Eds, 1995 Paris, ISBN 2-271-05252-1].

Mention may be made, among compounds of the PME type, of alkali metal silicates (in particular sodium silicate). Mention may be made, among compounds of the DCS type, of alumina of boehmite type and of colloidal silica.

Quite clearly, and contrary to the Patent Office's assertion, Applicants' disclosure discusses the use of various non-silicon containing compounds in the formation of the inorganic matrix.

It is well established that "[t]he presence of only one working example **should never be the sole reason for rejecting claims as being broader than the enabling disclosure**, even though it is a factor to be considered along with all the other factors." M.P.E.P.

§2164.02 (emphasis added). As discussed above, the Examiner's assertion that there is no guidance concerning the use of non-silicon containing compounds, is a mischaracterization of Applicants' disclosure. Thus, since the only remaining reason provided in support of the §112, first paragraph, rejection is the use of silicon-containing compounds in the examples of the specification, it is clear that such rejection is improper and should be withdrawn.

Furthermore, "[t]he scope of enablement must only bear a 'reasonable correlation' to the scope of the claims." M.P.E.P. §2164.08. In the present case, one skilled in the art would

have been enabled to conduct the claimed process in view of the level of skill in the art together with Applicants' disclosure. Accordingly, for at least the above reasons, withdrawal of the rejection is respectfully requested.

Claims 1-27 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 4,063,856 (*Dziedzic*). Claims 1-27 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 4,574,003 (*Gerk*). Claims 1-27 stand rejected under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 4,797,358 (*Motai et al*). Withdrawal of the above rejections is respectfully requested for at least the following reasons.

Independent claim 1 is directed to a process for the preparation of beads having a crosslinked inorganic matrix with a size controlled in the millimeter range, which comprises pouring a suspension comprising a precursor of the inorganic matrix and an alginate dropwise into a solution of a polyvalent cation salt, to obtain a reaction medium, wherein the reaction medium has a pH of less than 3, and crosslinking the precursor of the inorganic matrix by a sol-gel process.

Dziedzic relates to a particulate product of self-supporting spheres containing inorganic material, and more particularly relates to spheres containing particles dispersed in a gelled fugitive organic binder matrix. Col. 1, lines 17-22. *Dziedzic* is discussed at pages 1 and 2 of the instant specification. *Gerk* relates to the production of dense, alumina-based ceramic materials which are useful as abrasive grains. Col. 1, lines 9-11. *Motai et al* relates to a process for preparing an immobilized microorganism or enzyme by using a mixture of an alginate and silica sol as an entrapping material. Col. 1, lines 8-13.

Dziedzic, Gerk and Motai et al do not disclose or suggest each feature recited in independent claim 1. For example, the applied documents do not disclose or suggest pouring a suspension comprising a precursor of the inorganic matrix and an alginate dropwise into a solution of a polyvalent cation salt, to obtain a reaction medium, wherein the reaction medium has a pH of less than 3, as recited in claim 1. **None of the applied art discloses or suggests obtaining a reaction medium having a pH of less than 3.**

As discussed at page 4 of the instant specification, Applicants have discovered that by obtaining a reaction medium having a pH of less than 3, for example, the gelling of the alginate and the crosslinking of the inorganic matrix can be carried out simultaneously. By comparison, the applied art fails to have any recognition or suggestion that a pH of less than 3 of the reaction medium is a result effective variable of the simultaneous gelling of the alginate and the crosslinking of the inorganic matrix. Simply put, it would not have been obvious to pour a suspension comprising a precursor of the inorganic matrix and an alginate dropwise into a solution of a polyvalent cation salt, to obtain a reaction medium having a pH of less than 3.

For at least the above reasons, it is apparent that the claims are not anticipated by or rendered obvious over the applied art. Accordingly, withdrawal of the §102(b)/§103(a) rejections is respectfully requested.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order, and such action is earnestly solicited.


If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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